

AD9991**Table XLII. V-Sequence 5 (VSEQ5) Register Map**

Address	Data Bit Content	Default Value	Register Name	Description
A8	[1:0]	0	HBLKMASK_5	Masking Polarity during HBLK. H1 [0]. H3 [1].
	[2]	0	CLPOBPOL_5	CLPOB Start Polarity
	[3]	0	PBLKPOL_5	PBLK Start Polarity
	[7:4]	0	VPATSEL_5	Selected V-Pattern Group for V-Sequence 5
	[9:8]	0	VMASK_5	Enable Masking of V-Outputs (Specified by Freeze/Resume Registers)
	[11:10]	0	HBLKALT_5	Enable HBLK Alternation
	[23:12]	0	UNUSED	Unused
A9	[11:0]	0	VPATREPO_5	Number of Selected V-Pattern Group Repetitions for Odd Lines
	[23:12]	0	VPATREPHE_5	Number of Selected V-Pattern Group Repetitions for Even Lines
AA	[11:0]	0	VPATSTART_5	Start Position in the Line for the Selected V-Pattern Group
	[23:12]	0	HDLEN_5	HD Line Length (Number of Pixels) for V-Sequence 5
AB	[11:0]	0	PBLKTOG1_5	PBLK Toggle Position 1 for V-Sequence 5
	[23:12]	0	PBLKTOG2_5	PBLK Toggle Position 2 for V-Sequence 5
AC	[11:0]	0	HBLKTOG1_5	HBLK Toggle Position 1 for V-Sequence 5
	[23:12]	0	HBLKTOG2_5	HBLK Toggle Position 2 for V-Sequence 5
AD	[11:0]	0	HBLKTOG3_5	HBLK Toggle Position 3 for V-Sequence 5
	[23:12]	0	HBLKTOG4_5	HBLK Toggle Position 4 for V-Sequence 5
AE	[11:0]	0	HBLKTOG5_5	HBLK Toggle Position 5 for V-Sequence 5
	[23:12]	0	HBLKTOG6_5	HBLK Toggle Position 6 for V-Sequence 5
AF	[11:0]	0	CLPOBTOG1_5	CLPOB Toggle Position 1 for V-Sequence 5
	[23:12]	0	CLPOBTOG2_5	CLPOB Toggle Position 2 for V-Sequence 5

Table XLIII. V-Sequence 6 (VSEQ6) Register Map

Address	Data Bit Content	Default Value	Register Name	Description
B0	[1:0]	0	HBLKMASK_6	Masking Polarity during HBLK. H1 [0]. H3 [1].
	[2]	0	CLPOBPOL_6	CLPOB Start Polarity
	[3]	0	PBLKPOL_6	PBLK Start Polarity
	[7:4]	0	VPATSEL_6	Selected V-Pattern Group for V-Sequence 6
	[9:8]	0	VMASK_6	Enable Masking of V-Outputs (Specified by Freeze/Resume Registers)
	[11:10]	0	HBLKALT_6	Enable HBLK Alternation
	[23:12]	0	UNUSED	Unused
B1	[11:0]	0	VPATREPO_6	Number of Selected V-Pattern Group Repetitions for Odd Lines
	[23:12]	0	VPATREPHE_6	Number of Selected V-Pattern Group Repetitions for Even Lines
B2	[11:0]	0	VPATSTART_6	Start Position in the Line for the Selected V-Pattern Group
	[23:12]	0	HDLEN_6	HD Line Length (Number of Pixels) for V-Sequence 6
B3	[11:0]	0	PBLKTOG1_6	PBLK Toggle Position 1 for V-Sequence 6
	[23:12]	0	PBLKTOG2_6	PBLK Toggle Position 2 for V-Sequence 6
B4	[11:0]	0	HBLKTOG1_6	HBLK Toggle Position 1 for V-Sequence 6
	[23:12]	0	HBLKTOG2_6	HBLK Toggle Position 2 for V-Sequence 6
B5	[11:0]	0	HBLKTOG3_6	HBLK Toggle Position 3 for V-Sequence 6
	[23:12]	0	HBLKTOG4_6	HBLK Toggle Position 4 for V-Sequence 6
B6	[11:0]	0	HBLKTOG5_6	HBLK Toggle Position 5 for V-Sequence 6
	[23:12]	0	HBLKTOG6_6	HBLK Toggle Position 6 for V-Sequence 6
B7	[11:0]	0	CLPOBTOG1_6	CLPOB Toggle Position 1 for V-Sequence 6
	[23:12]	0	CLPOBTOG2_6	CLPOB Toggle Position 2 for V-Sequence 6

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Table XLIV.V-Sequence 7 (VSEQ7) Register Map

Address	Data Bit Content	Default Value	Register Name	Description
B8	[1:0]	0	HBLKMASK_7	Masking Polarity during HBLK. H1 [0]. H3 [1].
	[2]	0	CLPOBPOL_7	CLPOB Start Polarity
	[3]	0	PBLKPOL_7	PBLK Start Polarity
	[7:4]	0	VPATSEL_7	Selected V-Pattern Group for V-Sequence 7
	[9:8]	0	VMASK_7	Enable Masking of V-Outputs (Specified by Freeze/Resume Registers)
	[11:10]	0	HBLKALT_7	Enable HBLK Alternation
	[23:12]	0	UNUSED	Unused
B9	[11:0]	0	VPATREPO_7	Number of Selected V-Pattern Group Repetitions for Odd Lines
	[23:12]	0	VPATREPE_7	Number of Selected V-Pattern Group Repetitions for Even Lines
BA	[11:0]	0	VPATSTART_7	Start Position in the Line for the Selected V-Pattern Group
	[23:12]	0	HDLEN_7	HD Line Length (Number of Pixels) for V-Sequence 7
BB	[11:0]	0	PBLKTOG1_7	PBLK Toggle Position 1 for V-Sequence 7
	[23:12]	0	PBLKTOG2_7	PBLK Toggle Position 2 for V-Sequence 7
BC	[11:0]	0	HBLKTOG1_7	HBLK Toggle Position 1 for V-Sequence 7
	[23:12]	0	HBLKTOG2_7	HBLK Toggle Position 2 for V-Sequence 7
BD	[11:0]	0	HBLKTOG3_7	HBLK Toggle Position 3 for V-Sequence 7
	[23:12]	0	HBLKTOG4_7	HBLK Toggle Position 4 for V-Sequence 7
BE	[11:0]	0	HBLKTOG5_7	HBLK Toggle Position 5 for V-Sequence 7
	[23:12]	0	HBLKTOG6_7	HBLK Toggle Position 6 for V-Sequence 7
BF	[11:0]	0	CLPOBTOG1_7	CLPOB Toggle Position 1 for V-Sequence 7
	[23:12]	0	CLPOBTOG2_7	CLPOB Toggle Position 2 for V-Sequence 7

Table XLV.V-Sequence 8 (VSEQ8) Register Map

Address	Data Bit Content	Default Value	Register Name	Description
C0	[1:0]	0	HBLKMASK_8	Masking Polarity during HBLK. H1 [0]. H3 [1].
	[2]	0	CLPOBPOL_8	CLPOB Start Polarity
	[3]	0	PBLKPOL_8	PBLK Start Polarity
	[7:4]	0	VPATSEL_8	Selected V-Pattern Group for V-Sequence 8
	[9:8]	0	VMASK_8	Enable Masking of V-Outputs (Specified by Freeze/Resume Registers)
	[11:10]	0	HBLKALT_8	Enable HBLK Alternation
	[23:12]	0	UNUSED	Unused
C1	[11:0]	0	VPATREPO_8	Number of Selected V-Pattern Group Repetitions for Odd Lines
	[23:12]	0	VPATREPE_8	Number of Selected V-Pattern Group Repetitions for Even Lines
C2	[11:0]	0	VPATSTART_8	Start Position in the Line for the Selected V-Pattern Group
	[23:12]	0	HDLEN_8	HD Line Length (Number of Pixels) for V-Sequence 8
C3	[11:0]	0	PBLKTOG1_8	PBLK Toggle Position 1 for V-Sequence 8
	[23:12]	0	PBLKTOG2_8	PBLK Toggle Position 2 for V-Sequence 8
C4	[11:0]	0	HBLKTOG1_8	HBLK Toggle Position 1 for V-Sequence 8
	[23:12]	0	HBLKTOG2_8	HBLK Toggle Position 2 for V-Sequence 8
C5	[11:0]	0	HBLKTOG3_8	HBLK Toggle Position 3 for V-Sequence 8
	[23:12]	0	HBLKTOG4_8	HBLK Toggle Position 4 for V-Sequence 8
C6	[11:0]	0	HBLKTOG5_8	HBLK Toggle Position 5 for V-Sequence 8
	[23:12]	0	HBLKTOG6_8	HBLK Toggle Position 6 for V-Sequence 8
C7	[11:0]	0	CLPOBTOG1_8	CLPOB Toggle Position 1 for V-Sequence 8
	[23:12]	0	CLPOBTOG2_8	CLPOB Toggle Position 2 for V-Sequence 8

AD9991**Table XLVI. V-Sequence 9 (VSEQ9) Register Map**

Address	Data Bit Content	Default Value	Register Name	Description
C8	[1:0]	0	HBLKMASK_9	Masking Polarity during HBLK. H1 [0]. H3 [1].
	[2]	0	CLPOBPOL_9	CLPOB Start Polarity
	[3]	0	PBLKPOL_9	PBLK Start Polarity
	[7:4]	0	VPATSEL_9	Selected V-Pattern Group for V-Sequence 9
	[9:8]	0	VMASK_9	Enable Masking of V-Outputs (Specified by Freeze/Resume Registers)
	[11:10]	0	HBLKALT_9	Enable HBLK Alternation
	[23:12]	0	UNUSED	Unused
C9	[11:0]	0	VPATREPO_9	Number of Selected V-Pattern Group Repetitions for Odd Lines
	[23:12]	0	VPATREPE_9	Number of Selected V-Pattern Group Repetitions for Even Lines
CA	[11:0]	0	VPATSTART_9	Start Position in the Line for the Selected V-Pattern Group
	[23:12]	0	HDLEN_9	HD Line Length (Number of Pixels) for V-Sequence 9
CB	[11:0]	0	PBLKTOG1_9	PBLK Toggle Position 1 for V-Sequence 9
	[23:12]	0	PBLKTOG2_9	PBLK Toggle Position 2 for V-Sequence 9
CC	[11:0]	0	HBLKTOG1_9	HBLK Toggle Position 1 for V-Sequence 9
	[23:12]	0	HBLKTOG2_9	HBLK Toggle Position 2 for V-Sequence 9
CD	[11:0]	0	HBLKTOG3_9	HBLK Toggle Position 3 for V-Sequence 9
	[23:12]	0	HBLKTOG4_9	HBLK Toggle Position 4 for V-Sequence 9
CE	[11:0]	0	HBLKTOG5_9	HBLK Toggle Position 5 for V-Sequence 9
	[23:12]	0	HBLKTOG6_9	HBLK Toggle Position 6 for V-Sequence 9
CF	[11:0]	0	CLPOBTOG1_9	CLPOB Toggle Position 1 for V-Sequence 9
	[23:12]	0	CLPOBTOG2_9	CLPOB Toggle Position 2 for V-Sequence 9

Table XLVII. Field 0 Register Map

Address	Data Bit Content	Default Value	Register Name	Description
D0	[3:0]	0	VSEQSEL0_0	Selected V-Sequence for Region 0.
	[4]	0	SWEEP0_0	Select Sweep Region for Region 0. 0 = No Sweep, 1 = Sweep.
	[5]	0	MULTI0_0	Select Multiplier Region for Region 0. 0 = No Multiplier, 1 = Multiplier.
	[9:6]	0	VSEQSEL1_0	Selected V-Sequence for Region 1.
	[10]	0	SWEEP1_0	Select Sweep Region for Region 1. 0 = No Sweep, 1 = Sweep.
	[11]	0	MULTI1_0	Select Multiplier Region for Region 1. 0 = No Multiplier, 1 = Multiplier.
	[15:12]	0	VSEQSEL2_0	Selected V-Sequence for Region 2.
	[16]	0	SWEEP2_0	Select Sweep Region for Region 2. 0 = No Sweep, 1 = Sweep.
	[17]	0	MULTI2_0	Select Multiplier Region for Region 2. 0 = No Multiplier, 1 = Multiplier.
	[21:18]	0	VSEQSEL3_0	Selected V-Sequence for Region 3.
	[22]	0	SWEEP3_0	Select Sweep Region for Region 3. 0 = No Sweep, 1 = Sweep.
	[23]	0	MULTI3_0	Select Multiplier Region for Region 3. 0 = No Multiplier, 1 = Multiplier.
D1	[3:0]	0	VSEQSEL4_0	Selected V-Sequence for Region 4.
	[4]	0	SWEEP4_0	Select Sweep Region for Region 4. 0 = No Sweep, 1 = Sweep.
	[5]	0	MULTI4_0	Select Multiplier Region for Region 4. 0 = No Multiplier, 1 = Multiplier.
	[9:6]	0	VSEQSEL5_0	Selected V-Sequence for Region 5.
	[10]	0	SWEEP5_0	Select Sweep Region for Region 5. 0 = No Sweep, 1 = Sweep.
	[11]	0	MULTI5_0	Select Multiplier Region for Region 5. 0 = No Multiplier, 1 = Multiplier.
	[15:12]	0	VSEQSEL6_0	Selected V-Sequence for Region 6.
	[16]	0	SWEEP6_0	Select Sweep Region for Region 6. 0 = No Sweep, 1 = Sweep.
	[17]	0	MULTI6_0	Select Multiplier Region for Region 6. 0 = No Multiplier, 1 = Multiplier.
	[23:18]	0	UNUSED	Unused.
D2	[11:0]	0	SCP1_0	V-Sequence Change Position #1 for Field 0.
	[23:12]	0	SCP2_0	V-Sequence Change Position #2 for Field 0.
D3	[11:0]	0	SCP3_0	V-Sequence Change Position #3 for Field 0.
	[23:12]	0	SCP4_0	V-Sequence Change Position #4 for Field 0.
D4	[11:0]	0	VDLEN_0	VD Field Length (Number of Lines) for Field 0.
	[23:12]	0	HDLAST_0	HD Line Length (Number of Pixels) for Last Line in Field 0.

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Table XLVII. Field 0 Register Map (continued)

Address	Data Bit Content	Default Value	Register Name	Description
D5	[3:0] [9:4] [21:10]	0 0 0	VPATSECOND_0 SGMASK_0 SGPATSEL_0	Selected Second V-Pattern Group for VSG Active Line. Masking of VSG Outputs during VSG Active Line. Selection of VSG Patterns for Each VSG Output.
D6	[11:0] [23:12]	0 0	SGLINE1_0 SGLINE2_0	VSG Active Line 1. VSG Active Line 2 (if no Second Line Needed, Set to Same as Line 1 or Max).
D7	[11:0] [23:12]	0 0	SCP5_0 SCP6_0	V-Sequence Change Position #5 for Field 0. V-Sequence Change Position #6 for Field 0.

Table XLVIII. Field 1 Register Map

Address	Data Bit Content	Default Value	Register Name	Description
D8	[3:0] [4] [5] [9:6] [10] [11] [15:12] [16] [17] [21:18] [22] [23]	0 0 0 0 0 0 0 0 0 0 0 0	VSEQSEL0_1 SWEEP0_1 MULTI0_1 VSEQSEL1_1 SWEEP1_1 MULTI1_1 VSEQSEL2_1 SWEEP2_1 MULTI2_1 VSEQSEL3_1 SWEEP3_1 MULTI3_1	Selected V-Sequence for Region 0. Select Sweep Region for Region 0. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 0. 0 = No Multiplier, 1 = Multiplier. Selected V-Sequence for Region 1. Select Sweep Region for Region 1. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 1. 0 = No Multiplier, 1 = Multiplier. Selected V-Sequence for Region 2. Select Sweep Region for Region 2. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 2. 0 = No Multiplier, 1 = Multiplier. Selected V-Sequence for Region 3. Select Sweep Region for Region 3. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 3. 0 = No Multiplier, 1 = Multiplier.
D9	[3:0] [4] [5] [9:6] [10] [11] [15:12] [16] [17] [23:18]	0 0 0 0 0 0 0 0 0 0	VSEQSEL4_1 SWEEP4_1 MULTI4_1 VSEQSEL5_1 SWEEP5_1 MULTI5_1 VSEQSEL6_1 SWEEP6_1 MULTI6_1 UNUSED	Selected V-Sequence for Region 4. Select Sweep Region for Region 4. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 4. 0 = No Multiplier, 1 = Multiplier. Selected V-Sequence for Region 5. Select Sweep Region for Region 5. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 5. 0 = No Multiplier, 1 = Multiplier. Selected V-Sequence for Region 6. Select Sweep Region for Region 6. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 6. 0 = No Multiplier, 1 = Multiplier. Unused.
DA	[11:0] [23:12]	0 0	SCP1_1 SCP2_1	V-Sequence Change Position #1 for Field 1. V-Sequence Change Position #2 for Field 1.
DB	[11:0] [23:12]	0 0	SCP3_1 SCP4_1	V-Sequence Change Position #3 for Field 1. V-Sequence Change Position #4 for Field 1.
DC	[11:0] [23:12]	0 0	VDLEN_1 HDLAST_1	VD Field Length (Number of Lines) for Field 1. HD Line Length (Number of Pixels) for Last Line in Field 1.
DD	[3:0] [9:4] [21:10]	0 0 0	VPATSECOND_1 SGMASK_1 SGPATSEL_1	Selected Second V-Pattern Group for VSG Active Line. Masking of VSG Outputs during VSG Active Line. Selection of VSG Patterns for Each VSG Output.
DE	[11:0] [23:12]	0 0	SGLINE1_1 SGLINE2_1	VSG Active Line 1. VSG Active Line 2 (if no Second Line Needed, Set to Same as Line 1 or Max).
DF	[11:0] [23:12]	0 0	SCP5_1 SCP6_1	V-Sequence Change Position #5 for Field 1. V-Sequence Change Position #6 for Field 1.

AD9991**Table XLIX. Field 2 Register Map**

Address	Data Bit Content	Default Value	Register Name	Description
E0	[3:0]	0	VSEQSEL_2	Selected V-Sequence for Region 0.
	[4]	0	SWEEP0_2	Select Sweep Region for Region 0. 0 = No Sweep, 1 = Sweep.
	[5]	0	MULTI0_2	Select Multiplier Region for Region 0. 0 = No Multiplier, 1 = Multiplier.
	[9:6]	0	VSEQSEL1_2	Selected V-Sequence for Region 1.
	[10]	0	SWEEP1_2	Select Sweep Region for Region 1. 0 = No Sweep, 1 = Sweep.
	[11]	0	MULTI1_2	Select Multiplier Region for Region 1. 0 = No Multiplier, 1 = Multiplier.
	[15:12]	0	VSEQSEL2_2	Selected V-Sequence for Region 2.
	[16]	0	SWEEP2_2	Select Sweep Region for Region 2. 0 = No Sweep, 1 = Sweep.
	[17]	0	MULTI2_2	Select Multiplier Region for Region 2. 0 = No Multiplier, 1 = Multiplier.
	[21:18]	0	VSEQSEL3_2	Selected V-Sequence for Region 3.
	[22]	0	SWEEP3_2	Select Sweep Region for Region 3. 0 = No Sweep, 1 = Sweep
	[23]	0	MULTI3_2	Select Multiplier Region for Region 3. 0 = No Multiplier, 1 = Multiplier.
E1	[3:0]	0	VSEQSEL4_2	Selected V-Sequence for Region 4.
	[4]	0	SWEEP4_2	Select Sweep Region for Region 4. 0 = No Sweep, 1 = Sweep.
	[5]	0	MULTI4_2	Select Multiplier Region for Region 4. 0 = No Multiplier, 1 = Multiplier.
	[9:6]	0	VSEQSEL5_2	Selected V-Sequence for Region 5.
	[10]	0	SWEEP5_2	Select Sweep Region for Region 5. 0 = No Sweep, 1 = Sweep.
	[11]	0	MULTI5_2	Select Multiplier Region for Region 5. 0 = No Multiplier, 1 = Multiplier.
	[15:12]	0	VSEQSEL6_2	Selected V-Sequence for Region 6.
	[16]	0	SWEEP6_2	Select Sweep Region for Region 6. 0 = No Sweep, 1 = Sweep.
	[17]	0	MULTI6_2	Select Multiplier Region for Region 6. 0 = No Multiplier, 1 = Multiplier.
	[23:18]	0	UNUSED	Unused.
E2	[11:0]	0	SCP1_2	V-Sequence Change Position #1 for Field 2.
	[23:12]	0	SCP2_2	V-Sequence Change Position #2 for Field 2.
E3	[11:0]	0	SCP3_2	V-Sequence Change Position #3 for Field 2.
	[23:12]	0	SCP4_2	V-Sequence Change Position #4 for Field 2.
E4	[11:0]	0	VDLEN0_2	VD Field Length (Number of Lines) for Field 2.
	[23:12]	0	HDLAST_2	HD Line Length (Number of Pixels) for Last Line in Field 2.
E5	[3:0]	0	VPATSECOND_2	Selected Second V-Pattern Group for VSG Active Line.
	[9:4]	0	SGMASK_2	Masking of VSG Outputs during VSG Active Line.
	[21:10]	0	SGPATSEL_2	Selection of VSG Patterns for Each VSG Output.
E6	[11:0]	0	SGLINE1_2	VSG Active Line 1.
	[23:12]	0	SGLINE2_2	VSG Active Line 2 (if no Second Line Needed, Set to Same as Line 1 or Max).
E7	[11:0]	0	SCP5_2	V-Sequence Change Position #5 for Field 2.
	[23:12]	0	SCP6_2	V-Sequence Change Position #6 for Field 2.

Table L. Field 3 Register Map

Address	Data Bit Content	Default Value	Register Name	Description
E8	[3:0]	0	VSEQSEL_3	Selected V-Sequence for Region 0.
	[4]	0	SWEEP0_3	Select Sweep Region for Region 0. 0 = No Sweep, 1 = Sweep.
	[5]	0	MULTI0_3	Select Multiplier Region for Region 0. 0 = No Multiplier, 1 = Multiplier.
	[9:6]	0	VSEQSEL1_3	Selected V-Sequence for Region 1.
	[10]	0	SWEEP1_3	Select Sweep Region for Region 1. 0 = No Sweep, 1 = Sweep.
	[11]	0	MULTI1_3	Select Multiplier Region for Region 1. 0 = No Multiplier, 1 = Multiplier.
	[15:12]	0	VSEQSEL2_3	Selected V-Sequence for Region 2.
	[16]	0	SWEEP2_3	Select Sweep Region for Region 2. 0 = No Sweep, 1 = Sweep.
	[17]	0	MULTI2_3	Select Multiplier Region for Region 2. 0 = No Multiplier, 1 = Multiplier.
	[21:18]	0	VSEQSEL3_3	Selected V-Sequence for Region 3.
	[22]	0	SWEEP3_3	Select Sweep Region for Region 3. 0 = No Sweep, 1 = Sweep.
	[23]	0	MULTI3_3	Select Multiplier Region for Region 3. 0 = No Multiplier, 1 = Multiplier.

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Table L. Field 3 Register Map (continued)

Address	Data Bit Content	Default Value	Register Name	Description
E9	[3:0]	0	VSEQSEL4_3	Selected V-Sequence for Region 4.
	[4]	0	SWEETP4_3	Select Sweep Region for Region 4. 0 = No Sweep, 1 = Sweep.
	[5]	0	MULTI4_3	Select Multiplier Region for Region 4. 0 = No Multiplier, 1 = Multiplier.
	[9:6]	0	VSEQSEL5_3	Selected V-Sequence for Region 5.
	[10]	0	SWEETP5_3	Select Sweep Region for Region 5. 0 = No Sweep, 1 = Sweep.
	[11]	0	MULTI5_3	Select Multiplier Region for Region 5. 0 = No Multiplier, 1 = Multiplier.
	[15:12]	0	VSEQSEL6_3	Selected V-Sequence for Region 6.
	[16]	0	SWEETP6_3	Select Sweep Region for Region 6. 0 = No Sweep, 1 = Sweep.
	[17]	0	MULTI6_3	Select Multiplier Region for Region 6. 0 = No Multiplier, 1 = Multiplier.
	[23:18]		UNUSED	Unused.
EA	[11:0]	0	SCP1_3	V-Sequence Change Position #1 for Field 3.
	[23:12]	0	SCP2_3	V-Sequence Change Position #2 for Field 3.
EB	[11:0]	0	SCP3_3	V-Sequence Change Position #3 for Field 3.
	[23:12]	0	SCP4_3	V-Sequence Change Position #4 for Field 3.
EC	[11:0]	0	VDLEN_3	VD Field Length (Number of Lines) for Field 3.
	[23:12]	0	HDLAST_3	HD Line Length (Number of Pixels) for Last Line in Field 3.
ED	[3:0]	0	VPATSECOND_3	Selected Second V-Pattern Group for VSG Active Line.
	[9:4]	0	SGMASK_3	Masking of VSG Outputs during VSG Active Line.
	[21:10]	0	SGPATSEL_3	Selection of VSG Patterns for Each VSG Output.
EE	[11:0]	0	SGLINE1_3	VSG Active Line 1.
	[23:12]	0	SGLINE2_3	VSG Active Line 2 (if no Second Line Needed, Set to Same as Line 1 or Max).
EF	[11:0]	0	SCP5_3	V-Sequence Change Position #5 for Field 3.
	[23:12]	0	SCP6_3	V-Sequence Change Position #6 for Field 3.

Table LI. Field 4 Register Map

Address	Data Bit Content	Default Value	Register Name	Description
F0	[3:0]	0	VSEQSEL0_4	Selected V-Sequence for Region 0.
	[4]	0	SWEETP0_4	Select Sweep Region for Region 0. 0 = No Sweep, 1 = Sweep.
	[5]	0	MULTI0_4	Select Multiplier Region for Region 0. 0 = No Multiplier, 1 = Multiplier.
	[9:6]	0	VSEQSEL1_4	Selected V-Sequence for Region 1.
	[10]	0	SWEETP1_4	Select Sweep Region for Region 1. 0 = No Sweep, 1 = Sweep.
	[11]	0	MULTI1_4	Select Multiplier Region for Region 1. 0 = No Multiplier, 1 = Multiplier.
	[15:12]	0	VSEQSEL2_4	Selected V-Sequence for Region 2.
	[16]	0	SWEETP2_4	Select Sweep Region for Region 2. 0 = No Sweep, 1 = Sweep.
	[17]	0	MULTI2_4	Select Multiplier Region for Region 2. 0 = No Multiplier, 1 = Multiplier.
	[21:18]	0	VSEQSEL3_4	Selected V-Sequence for Region 3.
	[22]	0	SWEETP3_4	Select Sweep Region for Region 3. 0 = No Sweep, 1 = Sweep.
	[23]	0	MULTI3_4	Select Multiplier Region for Region 3. 0 = No Multiplier, 1 = Multiplier.
F1	[3:0]	0	VSEQSEL4_4	Selected V-Sequence for Region 4.
	[4]	0	SWEETP4_4	Select Sweep Region for Region 4. 0 = No Sweep, 1 = Sweep.
	[5]	0	MULTI4_4	Select Multiplier Region for Region 4. 0 = No Multiplier, 1 = Multiplier.
	[9:6]	0	VSEQSEL5_4	Selected V-Sequence for Region 5.
	[10]	0	SWEETP5_4	Select Sweep Region for Region 5. 0 = No Sweep, 1 = Sweep.
	[11]	0	MULTI5_4	Select Multiplier Region for Region 5. 0 = No Multiplier, 1 = Multiplier.
	[15:12]	0	VSEQSEL6_4	Selected V-Sequence for Region 6.
	[16]	0	SWEETP6_4	Select Sweep Region for Region 6. 0 = No Sweep, 1 = Sweep.
	[17]	0	MULTI6_4	Select Multiplier Region for Region 6. 0 = No Multiplier, 1 = Multiplier.
	[23:18]		UNUSED	Unused.
F2	[11:0]	0	SCP1_4	V-Sequence Change Position #1 for Field 4.
	[23:12]	0	SCP2_4	V-Sequence Change Position #2 for Field 4.
F3	[11:0]	0	SCP3_4	V-Sequence Change Position #3 for Field 4.
	[23:12]	0	SCP4_4	V-Sequence Change Position #4 for Field 4.

AD9991**Table LI. Field 4 Register Map (continued)**

Address	Data Bit Content	Default Value	Register Name	Description
F4	[11:0] [23:12]	0 0	VDLEN_4 HDLAST_4	VD Field Length (Number of Lines) for Field 4. HD Line Length (Number of Pixels) for Last Line in Field 4.
F5	[3:0] [9:4] [21:10]	0 0 0	VPATSECOND_4 SGMASK_4 SGPATSEL_4	Selected Second V-Pattern Group for VSG Active Line. Masking of VSG Outputs during VSG Active Line. Selection of VSG Patterns for Each VSG Output.
F6	[11:0] [23:12]	0 0	SGLINE1_4 SGLINE2_4	VSG Active Line 1: VSG Active Line 2 (if no Second Line Needed, Set to Same as Line 1 or Max).
F7	[11:0] [23:12]	0 0	SCP5_4 SCP6_4	V-Sequence Change Position #5 for Field 4. V-Sequence Change Position #6 for Field 4.

Table LII. Field 5 Register Map

Address	Data Bit Content	Default Value	Register Name	Description
F8	[3:0] [4] [5] [9:6] [10] [11] [15:12] [16] [17] [21:18] [22] [23]	0 0 0 0 0 0 0 0 0 0 0 0	VSEQSEL0_5 SWEEP0_5 MULTIO_5 VSEQSEL1_5 SWEEP1_5 MULTI11_5 VSEQSEL2_5 SWEEP2_5 MULTI2_5 VSEQSEL3_5 SWEEP3_5 MULTI3_5	Selected V-Sequence for Region 0. Select Sweep Region for Region 0. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 0. 0 = No Multiplier, 1 = Multiplier. Selected V-Sequence for Region 1. Select Sweep Region for Region 1. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 1. 0 = No Multiplier, 1 = Multiplier. Selected V-Sequence for Region 2. Select Sweep Region for Region 2. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 2. 0 = No Multiplier, 1 = Multiplier. Selected V-Sequence for Region 3. Select Sweep Region for Region 3. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 3. 0 = No Multiplier, 1 = Multiplier.
F9	[3:0] [4] [5] [9:6] [10] [11] [15:12] [16] [17] [23:18]	0 0 0 0 0 0 0 0 0 0	VSEQSEL4_5 SWEEP4_5 MULTI4_5 VSEQSEL5_5 SWEEP5_5 MULTI5_5 VSEQSEL6_5 SWEEP6_5 MULTI6_5 UNUSED	Selected V-Sequence for Region 4. Select Sweep Region for Region 4. 0 = No Sweep, 1 = Sweep Select Multiplier Region for Region 4. 0 = No Multiplier, 1 = Multiplier. Selected V-Sequence for Region 5. Select Sweep Region for Region 5. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 5. 0 = No Multiplier, 1 = Multiplier. Selected V-Sequence for Region 6. Select Sweep Region for Region 6. 0 = No Sweep, 1 = Sweep. Select Multiplier Region for Region 6. 0 = No Multiplier, 1 = Multiplier. Unused.
FA	[11:0] [23:12]	0 0	SCP1_5 SCP2_5	V-Sequence Change Position #1 for Field 5. V-Sequence Change Position #2 for Field 5.
FB	[11:0] [23:12]	0 0	SCP3_5 SCP4_5	V-Sequence Change Position #3 for Field 5. V-Sequence Change Position #4 for Field 5.
FC	[11:0] [23:12]	0 0	VDLEN_5 HDLAST_5	VD Field Length (Number of Lines) for Field 5. HD Line Length (Number of Pixels) for Last Line in Field 5.
FD	[3:0] [9:4] [21:10]	0 0 0	VPATSECOND_5 SGMASK_5 SGPATSEL_5	Selected Second V-Pattern Group for VSG Active Line. Masking of VSG Outputs during VSG Active Line. Selection of VSG Patterns for Each VSG Output.
FE	[11:0] [23:12]	0 0	SGLINE1_5 SGLINE2_5	VSG Active Line 1. VSG Active Line 2 (if no Second Line Needed, Set to Same as Line 1 or Max).
FF	[11:0] [23:12]	0 0	SCP5_5 SCP6_5	V-Sequence Change Position #5 for Field 5. V-Sequence Change Position #6 for Field 5.

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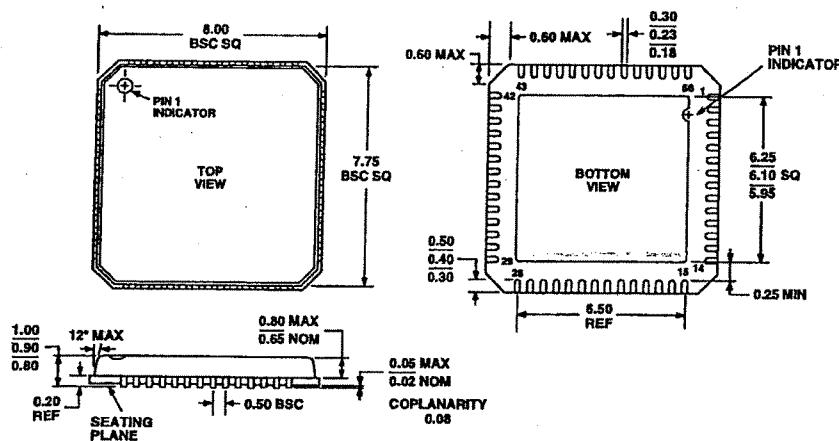
OUTLINE DIMENSIONS

56-Lead Lead Frame Chip Scale Package [LFCSP]

8 mm x 8 mm Body

(CP-56)

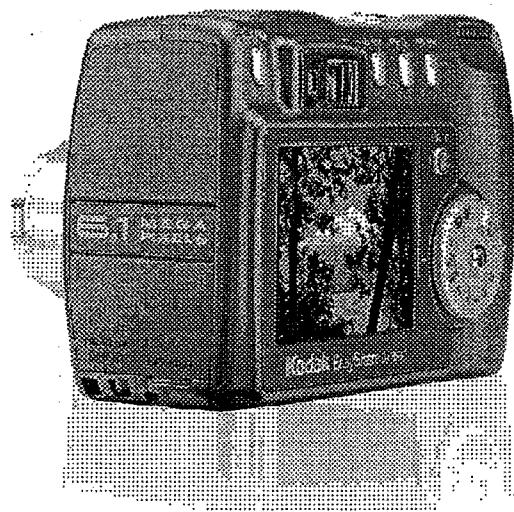
Dimensions shown in millimeters



COMPLIANT TO JEDEC STANDARDS MO-220-VLLD-2

EXHIBIT 11.H

Kodak EasyShare DX7630 zoom digital camera



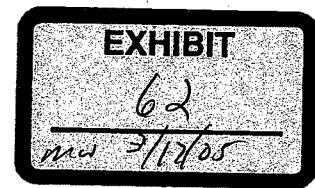
User's guide

www.kodak.com

For interactive tutorials, www.kodak.com/go/howto

For help with your camera, www.kodak.com/go/dx7630support

PLAINTIFF'S
TRIAL EXHIBIT
PTX 157
C.A. No 04-1373(KAJ)



AX036394



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P/N 4J1082

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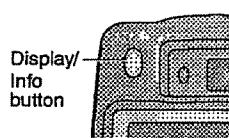
Taking pictures and videos

Taking a picture

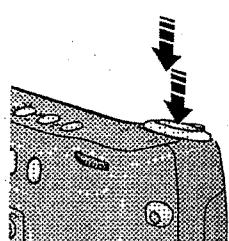
- 1 Turn the Mode dial to Auto (See page 11 for other mode descriptions.)

The camera screen displays the mode name and description. To interrupt the description, press any button. To redisplay the description, press the OK button.

- 2 Press the Display/Info button to turn on the camera screen, or use the viewfinder to frame your subject.



- 3 Press the Shutter button **halfway** to set the exposure and focus.



- 4 When the ready light turns green, continue pressing the Shutter button **completely down** to take the picture.

If the ready light is steady or blinking red, release your finger, recompose the scene, and return to Step 3.

When the ready light blinks green, the picture is being saved; you can still take pictures.

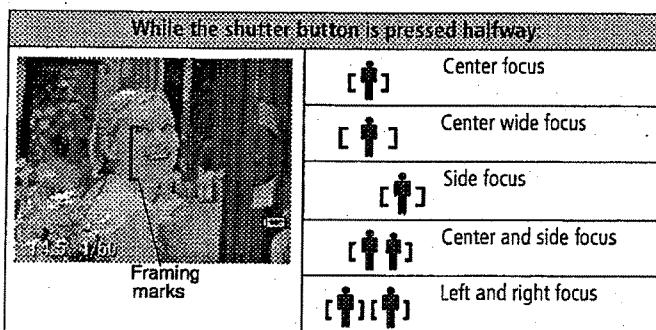
NOTE: The camera screen turns on automatically in all modes except Auto. To make the camera screen turn on automatically in Auto, see Liveview (Auto), page 24.

Taking pictures and videos

Using the auto-focus framing marks

When using the camera screen as a viewfinder, framing marks indicate where the camera is focusing. For the best pictures, the camera attempts to focus on foreground subjects, even if the subjects are not centered in the scene.

- 1 With the camera screen on, press the Shutter button **halfway and hold**.
When the framing marks turn red, focus is accomplished.



- 2 Press the Shutter button **the rest of the way down** to take the picture.
- 3 If the camera is not focusing on the desired subject (or if the framing marks disappear and the Ready light blinks red), release your finger, recompose the scene, and return to Step 2.

NOTE: Framing marks do not appear in Landscape or Video mode.

Taking a video

- 1 Turn the Mode dial to Video .
- 2 Use the viewfinder or camera screen to frame your subject.
- 3 Press the Shutter button completely down and release. To stop recording, press and release the Shutter button again.

NOTE: If you prefer, press the Shutter button completely down and hold it for more than 2 seconds to begin recording. To stop recording, release the Shutter button.

You can change optical zoom before (but not during) video recording.

Taking pictures and videos

Using digital zoom

Use digital zoom in any still mode to get an additional 4X magnification beyond optical zoom. Combined zoom settings are from 3.6X to 12X. You must turn on the camera screen before activating digital zoom.

- 1 Press the Display/Info button to turn on the camera screen.
 - 2 Pull the Zoom button to the optical zoom limit (3X). Release the button, then pull it again.
- The camera screen displays the zoomed image and the zoom indicator.*
- 3 Press the Shutter button **halfway and hold** to set the exposure and focus, then press **the rest of the way down** to take the picture.

NOTE: You cannot use digital zoom for video recording.

IMPORTANT: *You may notice a decrease in printed image quality when using digital zoom. The blue slider on the zoom indicator pauses, then turns red when the picture quality is approximately 1 MP. For an acceptable 4 x 6 in. (10 x 15 cm) print, ensure that the slider remains blue.*

Camera modes

Use this mode	for
 Auto	General picture-taking. Automatically sets exposure, focus, and flash.
SCN	Point-and-shoot simplicity when taking pictures under 16 special conditions. (See Scene modes, page 13.)
P	Controlling exposure compensation (how much light enters the camera) and flash compensation. The camera automatically sets the shutter speed and aperture (f-stop) based on the scene lighting. Program mode offers the ease of auto shooting with full access to all menu options. Use the jog dial to select settings. (See P, A, S, M, and C mode, page 14.) Press the Menu button to change other settings.

EXHIBIT 11.I

EXHIBIT 11.I

IS

CONFIDENTIAL

CERTIFICATE OF SERVICE

I, Julia Heaney, hereby certify that on October 23, 2006, I caused to be electronically filed the foregoing with the Clerk of the Court using CM/ECF, which will send notification of such filing(s) to the following:

Collins J. Seitz, Jr., Esquire
Connolly, Bove, Lodge & Hutz LLP

and that I caused copies to be served upon the following in the manner indicated:

BY HAND DELIVERY AND ELECTRONIC MAIL

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1007 North Orange Street
P.O. Box 2207
Wilmington, DE 19899

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Michael J. Summersgill, Esquire
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60 State Street
Boston, MA 02109

/s/ Julia Heaney

Julia Heaney (#3052)